



PTO/SB/08A (08-03)

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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 5

Complete if Known

Application Number	10/669,141
Filing Date	September 23, 2003
First Named Inventor	Milan Kokta
Art Unit	1775
Examiner Name	Stephen J. Stein
Attorney Docket Number	1035-BI4282

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
SSS	AA	US- 3,625,868	12/07/1971	Grabmaier et al.	
SSS	AB	US- 3,736,158	05/29/1973	Cullen et al.	
SSS	AC	US- 3,816,906	06/18/1974	Falckenberg	
SSS	AD	US- 3,883,313	05/13/1975	Cullen et al.	
SSS	AE	US- 3,885,978	05/27/1975	Doi et al.	
SSS	AF	US- 3,990,902	11/09/1976	Nishizawa, et al.	
SSS	AG	US- 3,950,504	04/13/1976	Belding et al.	
SSS	AH	US- 4,370,739	01/25/1983	Wang et al.	
SSS	AI	US- 4,755,314	07/05/1988	Sakaguchi et al.	
SSS	AJ	US- 5,138,298	08/11/1992	Shino	
SSS	AK	US- 5,850,410	12/15/1998	Kuramata	
SSS	AL	US- 6,533,874 B1	03/18/2003	Vaudo et al.	
SSS	AM	US- 2003/0188678 A1	10/09/2003	Kokta et al.	
SSS	AN	US- 6,839,362 B2	01/05/2005	Kokta et al.	
SSS	AO	US- 6,844,084 B2	01/18/2005	Kokta et al.	
SSS	AP	US- 3,424,955	01/28/1969	Seiter et al.	
SSS	AQ	US- 5,557,624	09/17/1996	Stultz, et al.	
SSS	AR	US- 6,366,596	04/02/2002	Yin, et al.	
SSS	AS	US- 6,023,479	02/08/2000	Thony, et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁴
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
SSS	AT	FR 1,471,976	03/24/1966	Siemens Aktiengesellsc.	Corr. 3,424,955	
SSS	AU	JP 11-157997	06/15/1999	Kyocera Corporation	Abstract Only	
SSS	AV	JP 09-278595	10/28/1997	Sumitomo Elect. Ind. Ltd.	Abstract Only	
SSS	AW	JP 62-188325	08/17/1987	Sumitomo Elect. Ind. Ltd.	Abstract Only	
SSS	AX	JP 58-211736	12/09/1983	Toshiba Corporation	Abstract Only	
SSS	AY	JP 07-307316	11/21/1995	Sumitomo Elect. Ind. Ltd.	Abstract Only	

Examiner Signature	<i>Stephen J. Stein</i>	Date Considered	3/26/2005
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	10/669,141
		Filing Date	September 23, 2003
		First Named Inventor	Milan R. Kokta
		Art Unit	1775
		Examiner Name	Stephen J. Stein
Sheet 2 of 5	Attorney Docket Number	1035-BI4282	

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		Number-Kind Code ² (if known)			
SSS	BA	US- 4,963,520	10/16/1990	Yoo, et al.	
SSS	BB	US- 5,982,796	11/09/1999	Kokta, et al.	
SSS	BC	US- 5,654,973	08/05/1997	Stultz, et al.	
SSS	BD	US-			
SSS	BE	US-			
	BF	US-			
	BG	US-			
	BH	US-			
	BI	US-			
	BJ	US-			
	BK	US-			
	BL	US-			
	BM	US-			
	BN	US-			
	BO	US-			
	BP	US-			
	BQ	US-			
	BR	US-			
	BS	US-			

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SSS	BT	EP 0 263 171 B1	11/25/1992	UOP		
SSS	BU	EP 0 762 930 B1	07/12/2000	BP Amoco Corporation		
✓	BV	WO 01/99155 A2	12/27/2001	Nichia Corporation		
✓	BW	WO 02/095887 A2	11/28/2002	SG Ceramics & Plastics, Inc.		
	BX					
	BY					

Examiner Signature	<i>Stephen J. Stein</i>	Date Considered	5/26/2005
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Sheet 3 of 5	Attorney Docket Number	1035-BI4282	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
SSS	CA	Efimov, A.N., et al., "On an Unusual Azimuthal Orientation Relationship in the System Gallium Nitride Layer on Spinel Substrate", CRYSTALLOGRAPHY REPORTS, 45(2): 312-317 (2000).	
SSS	CB	Sun C.J., et al., "Mg-doped green light emitting diodes over cubic (1 1 1) MgAl ₂ O ₄ substrate", APP. PHYS. LETT. 72(19): 2361-2363 (1998).	
SSS	CC	Efimov, A.N., et al., "Symmetry constraints and epitaxial growth on non-isomorphic substrate", THIN SOLID FILMS 260: 111-117 (1995).	
SSS	CD	George, T., et al., "Novel symmetry in the growth of gallium nitride on magnesium aluminate substrates", APPL. PHYS. LETT. 68(3): 337-339 (1996).	
SSS	CE	Sun C.J., et al., "Deposition of high quality wurtzite GaN films over cubic (1 1 1) MgAl ₂ O ₄ substrates using low pressure and metalorganic chemical vapor deposition, " APPL. PHYS. LETT. 68(8): 1129-1131 (1996).	
SSS	CF	Nakamura, S., et al., "Characteristics of InGaN multi-quantum-well-structure laser diodes, " APPL. PHYS. LETT. 68(23): 3269-3271 (1996).	
SSS	CG	Khan, M.A., et al., "Cleaved cavity optically pumped InGaN-GaN laser grown on spinel substrates," APPL. PHYS. LETT. 69(16): 2418-2420 (1996).	
SSS	CH	Tempel, A., et al., "Nachweis von Stapelfehlern in GaN-Exitaxieschichten mittels Elektronenbeugung," KRISTALL UND TECHNIK 10(7): 741-746 (1975).	
SSS	CI	Tempel, A., et al., "Zur Epitaxie von Galliumnitride auf nichtstoechiometrischem Spinell im System GaC1/NH3/He, " KRISTALL UND TECHNIK 10(7): 747-758 (1975)	
SSS	CJ	K.V. Yumashev, "Saturable absorber Co ²⁺ : MgAl ₂ O ₃ crystal for Q switching of 1.34-um Nd ³⁺ : YAlO ₃ and 1.54-um Er ³⁺ : glass lasers," APPLIED OPTICS 38(30): 6343-6346 (1999).	

Examiner Signature		Date Considered	5/26/2005
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Sheet 4	of 5	Attorney Docket Number	1035-BI4282

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SJS	DA	Giess et al., "Growth of Single Crystal MgGa ₂ O ₄ Spinel", IBM TECHNICAL DISCLOSURE BULLETIN, Vol. 15, no. 1, June 1972, pgs 151-152, XP-002315746.	
SJS	DB	Anon., "Spinel Crystals for Electronic Devices", MANUFACTURING TECHNOLOGY NOTE, Vol. NTN-77, no. 0735, April 1977, XP-002315747.	
SJS	DC	Grabmaier et al., "Czochralski Growth of Magnesium-Aluminum Spinel", J. AMERICAN CERAMIC SOCIETY, Vol. 51, no. 6, June 1968, pgs 355-356, XP-002315185.	
88S	DD	Wyon et al., "Czochralski Growth and Optical Properties of Magnesium-Aluminum Spinel Doped with Nickel", JOURNAL OF CRYSTAL GROWTH, NORTH-HOLLAND PUBLISHING CO. AMSTERDAM, NL, Vol. 79, no. 1-3, part 2, 1986, pgs 710-713, XP-002250057.	
SJS	DE	Pinckney, L.R., "Transparent, high strain point spinel glass-ceramics", JOURNAL OF NON-CRYSTALLINE SOLIDS, Vol. 255, pp. 171-177, 1999.	
SJS	DF	Nakamura, S. "Current Status and Future Prospects of InGa _N -Based Laser Diodes", ISAP INTERNATIONAL, Vol. 1, pgs. 5-17, 2000.	
SJS	DG	Kisailus D., et al., "Growth of Epitaxial GaN of LiGaO ₂ Substrates Via a Reaction With Ammonia", J. MATER. RES., Vol. 16, no. 7, pgs 2077-2081, 2001.	
SJS	DH	Nakamura, S., et al., "InGa _N MQW LDs Grown on MgAl ₂ O ₄ Substrates," In THE BLUE LASER DIODE, (NY: Springer-Verlag), pp. 233-243, 1997 (update included).	
88S	DI	Mordoc, H., et al., "Large-band-gap SiC, III-V nitride, and II-VI ZnSe-based Semiconductor Device Technologies", J. APPL. PHYS., Vol. 76, no. 3, pgs 1363-1398, 1994.	
SJS	DJ	Yumashev, K.V., et al., "Nonlinear spectroscopy and passive Q-switching operation of a Co ²⁺ : LaMgAl ₁₁ O ₁₉ crystal," J. OPT. SOC. AM. B., 16(12): 2189-2194 (1999).	

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SSS	EA	Camargo, M.B., et al., "Co2+ Y3Sc2Ga3O12 (YSGG) Passive Q-Switch for Infrared Erbium Lasers," submitted to LEOS in 1994.	
SSS	EB	Mikhailov, V.P., et al., "Passive Q-switch performance at 1.3u (1.5u) and nonlinear spectroscopy of Co2+: MgAl2O4 and Co2+: LaMgAl11O9 crystals," OSA TOPS VOL. 26 Advanced Solid-State Lasers, pp. 317-324 (1999).	
SSS	EC	Stulz, R.D., et al., "Divalent Uranium and Cobalt Saturable Absorber Q-Switches at 1.5um," OSA Proceedings on Advanced Solid-State Lasers, 24:460-464 (1995).	
SSS	ED	Birnbaum, M., et al., "Co2+: ZnSe Saturable Absorber Q-Switch for the 1.54 Um Er3+: Yb3+: Glass Laser," OSA TOPS Vol. 10 Advanced Solid State Lasers, pp. 148-151 (1997).	
SSS	EE	Machida, H., et al., "difficulties encountered during the Czochralski growth of TiO2 single crystals," JOURNAL OF CRYSTAL GROWTH, 112: 835-837 (1997).	
SSS	EF	Camargo, M.B., et al., "Broad-band 1.54 um Saturable Absorber Q-switch with Co2+, " submitted to ASSL in 1995.	
	EG		
	EH		
	EI		
	EJ		

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